



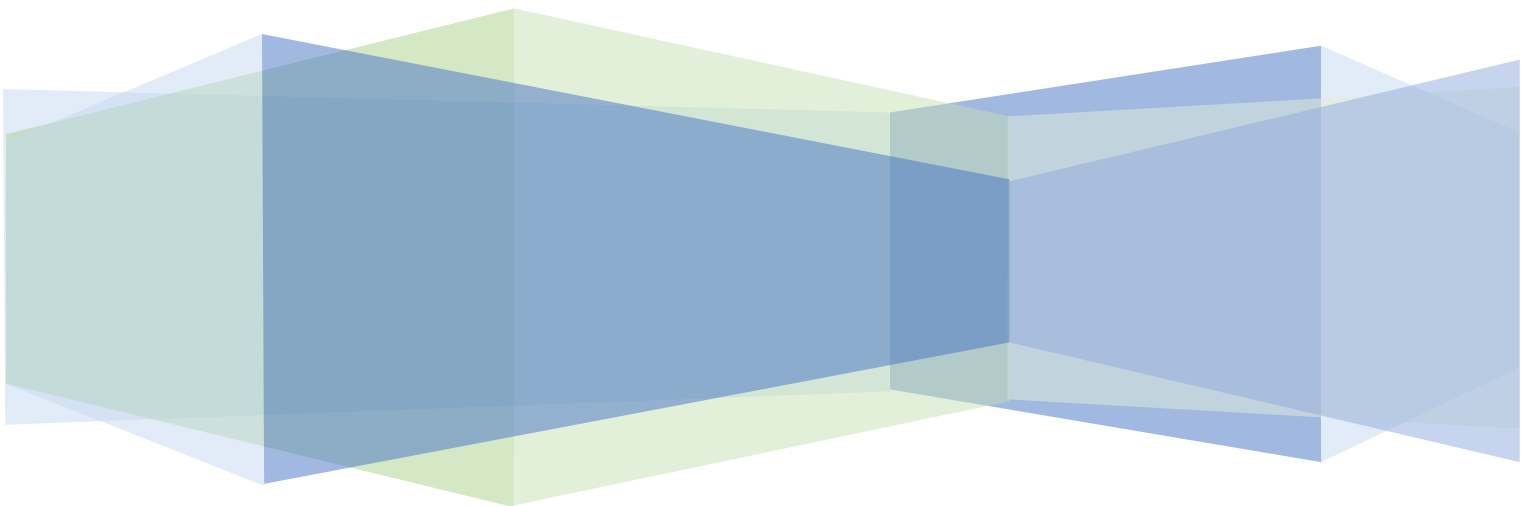
# **MONTGOMERY COUNTY TO ASHBURN VA FIBER PROJECT**

## **IMPROVING MONTGOMERY COUNTY BUSINESS CONNECTIVITY TO ASHBURN, VIRGINIA DATA CENTERS**

**April 2018**

**Montgomery County, MD**

**[www.montgomerycountymd.gov/ultraMontgomery](http://www.montgomerycountymd.gov/ultraMontgomery)**



## WHAT IS THE ULTRAMONTGOMERY ASHBURN FIBER PROJECT?

The Montgomery County to Ashburn, Virginia, Potomac River Fiber Crossing is a key component of County Executive Isiah Leggett's ultraMontgomery Broadband Economic Program. The ultraMontgomery program is designed to grow and attract the knowledge-based businesses that rely on ultra-high speed broadband networks. The purpose of the project is to create faster, more reliable, fiber connections for Montgomery County and Maryland businesses and research institutions by constructing fiber underneath the Potomac River to more directly reach data centers in Ashburn, Va.

## WHY DO BUSINESSES NEED TO REACH ASHBURN?

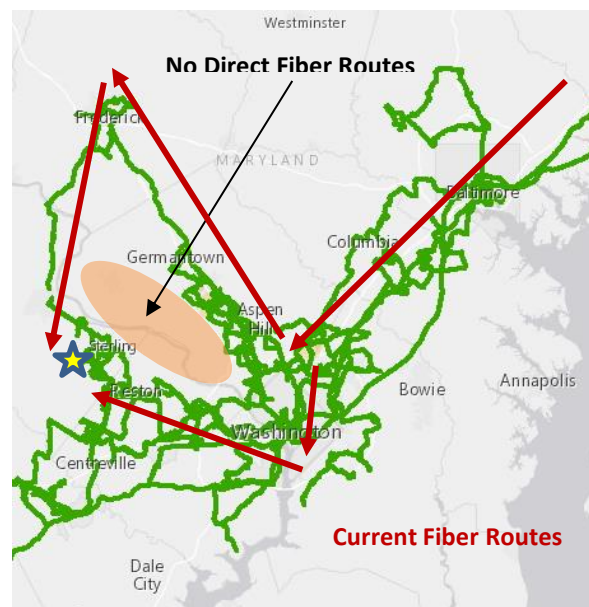
Ashburn is the data center hub for all Internet traffic and "cloud services" on the East Coast. More than 90% of all East Coast Internet routes use one of the 10,000 Internet connection points in Ashburn. However, there is no direct path between Montgomery County and Ashburn, though these areas are located on opposite sides of the Potomac River in close proximity to each other. A shorter, direct fiber route to Ashburn could lower broadband networking costs, improve network reliability, enhance speed and network security, and add critical path diversity to Ashburn for all entities in the Montgomery County-Baltimore-Northeast U.S. corridor.

## WHAT ARE THE BENEFITS OF SHORTER FIBER ROUTES?

### *A Shorter Fiber Route Will Improve Network Reliability*

Building a major alternative route through Montgomery County to Ashburn would add critical route diversity for businesses and government entities that increasingly rely on cloud-based services (*i.e.*, using the Internet to get to records, data, and to communicate). A new route that can be used by many operators would create a highly effective ring and a diverse route that could make all of the northeast U.S. Internet traffic more reliable. A diverse route from Montgomery County to Ashburn that does not require going through McLean or DC would be significant benefit for large businesses, research institutions and federal agencies located within the County

Map 1: Regional Commercial Fiber



## ***A Shorter Fiber Route Will Lower Fiber and Bandwidth Leasing Costs***

Ultimately, longer distances increase equipment and operational costs. Expanding market opportunities to lease dark fiber will create price competition in the market for leased dark fiber and lit services. More fiber routes to reach Ashburn will enable more fiber operators to offer lower-priced dark fiber or lit services to reach Ashburn, and users should realize the benefits of competition, both through improved services and/or more competitive pricing.

## ***A Shorter Fiber Route Will Reduce Latency to Enhance Performance***

A shorter fiber reduces latency. Signal degradations increase proportionately to speed (bandwidth used) and distance traveled. Minimizing latency is sometimes as important to the overall performance of a communications application as capacity and reliability. Shorter distances reduce the need to use costly equipment to regenerate signals (to overcome latency issues). Shorter distances also make it technically possible for larger institutions and public agencies to rely less on lit services leased from third-party providers, and transmit data entirely within their own networks using dark fiber.

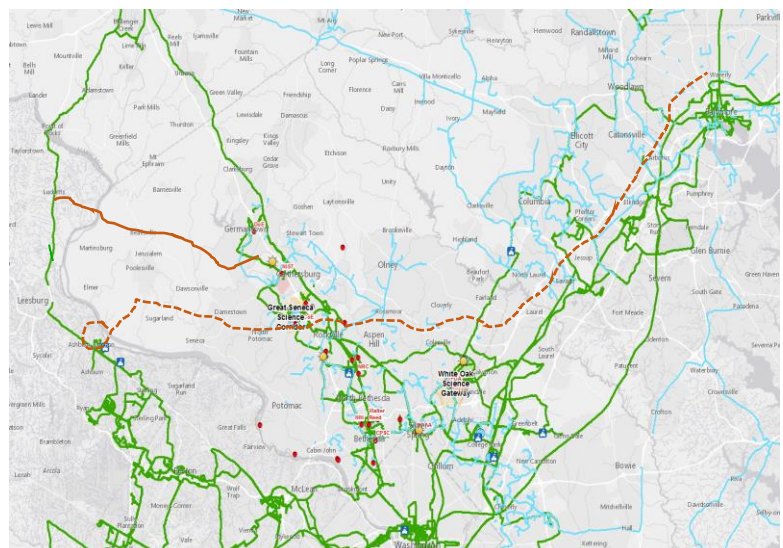
## **WHAT'S THE STATUS OF THE POTOMAC RIVER FIBER PROJECTS?**

***Crown Castle – Completed 2016.*** Crown Castle owns fiber in the DC metro area and provides lit services for businesses, as well as wireless infrastructure for carriers. Crown Castle acquired Lighttower in 2017 and Lighttower had previously acquired Fibertech in 2015. In 2016, Lighttower completed construction of the first direct fiber route underneath the Potomac River at White's Ferry Rd to connect Montgomery County through Poolesville to Ashburn data centers. Both Lighttower and Fibertech had significant fiber presence in Montgomery County and Baltimore. As a result, Crown Castle's DC By-Pass Montgomery County-Ashburn fiber route has a significant footprint to reach Montgomery County businesses.

### ***Dark Fiber & Infrastructure – Expected Completion 2019.***

In 2018, Dark Fiber and Infrastructure (DFI) acquired the assets of USA Fiber. In 2016, USA Fiber built a fiber loop to connect 30 Ashburn data centers, and began construction to connect these Ashburn data centers to Montgomery County data centers – Atlantech Online in Rockville and Bytegrid in White Oak, and to Baltimore data centers. Construction of 8x864 fibers underneath the Potomac River at Sycamore Landing Road between

**Map 2: New Direct Fiber Routes to Ashburn**



MD and VA has been completed. DFI is working to complete construction and Montgomery County is supporting connecting the DFI fiber to County's fiber network, FiberNet, and other commercial providers to expand business access to the DFI route.

## Economic Benefits of a Direct Montgomery County-Ashburn Fiber Route

- **Bolster Our Knowledge-Based Economy.** Information, as well as Professional, Scientific and Technical, jobs in Montgomery County generate 8% of Maryland's total economy.
- **Stimulate Job Growth in our "advanced industries."** The Brookings Institution recently reported that the nation's "tech" sector created almost 1 million jobs, or 18 percent of the nation's total job growth, between 2010 and 2013.
- **Enhance the Competitiveness of our Private and Public Sector Employers.** Stimulating the competitive fiber market improves access to high-speed, more reliable, more efficient, more connected, less expensive broadband for business, research, super-computing and data center growth within the County.
- **Bridge the "Gap" in Internet Traffic Flow Between Key Data Centers in Ashburn, VA and Business Centers in Maryland.** Diverse fiber routes to Ashburn will benefit businesses, educational institutions, and governmental and research entities throughout the Baltimore-Washington corridor lowering broadband networking costs, improving network reliability, and enhancing speed and network security.
- **Promote Montgomery County and the State of Maryland as a Hub For Technology Innovation.** State-of-the-art broadband infrastructure will enable continued growth of advanced technology solutions for public and private uses.

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